

PNP Silicon Epitaxial Planar Transistor

B772

FEATURES

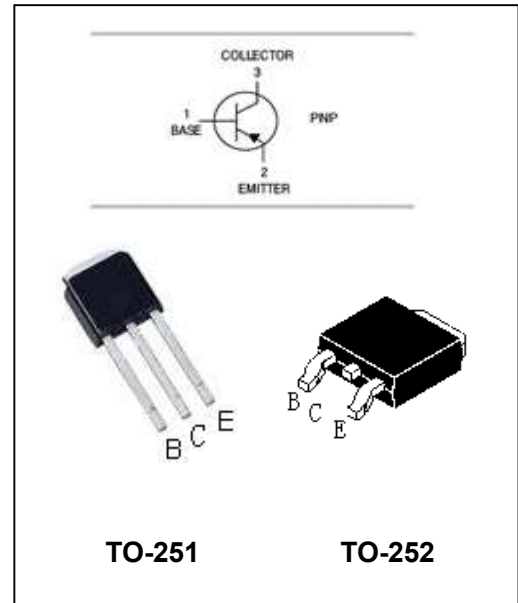
- Low speed switching.
- Low saturation voltage.
- Excellent h_{FE} linearity and high h_{FE} .
- Complementary: D882.



Lead-free

APPLICATIONS

- Audio frequency power amplifier.



MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

| Symbol | Parameter | Value | Units |
|-----------------|--|-------------|----------------------|
| V_{CBO} | Collector-Base Voltage | -40 | V |
| V_{CEO} | Collector-Emitter Voltage | -30 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current -Continuous | -3 | A |
| P_C | Collector Dissipation | 1.25 | W |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient Air | 100 | $^{\circ}\text{C/W}$ |
| T_j, T_{stg} | Junction and Storage Temperature | -55 to +150 | $^{\circ}\text{C}$ |

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|------------------------------------|-----|------|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -100\mu A, I_E = 0$ | -40 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -10mA, I_B = 0$ | -30 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -100\mu A, I_C = 0$ | -6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -40V, I_B = 0$ | | | -1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CB} = -30V, I_E = 0$ | | | -1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -6V, I_C = 0$ | | | -1 | μA |
| DC current gain | h_{FE} | $V_{CE} = -2V, I_C = -1A$ | 60 | 160 | 400 | |
| | | $V_{CE} = -2V, I_C = -20mA$ | 30 | 220 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -2A, I_B = -0.2A$ | | -0.3 | -0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -2A, I_B = -0.2A$ | | -1.0 | -2.0 | V |
| Transition frequency | f_T | $V_{CE} = -5V, I_C = -0.1A$ | | 80 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 55 | | pF |

CLASSIFICATION OF h_{FE}

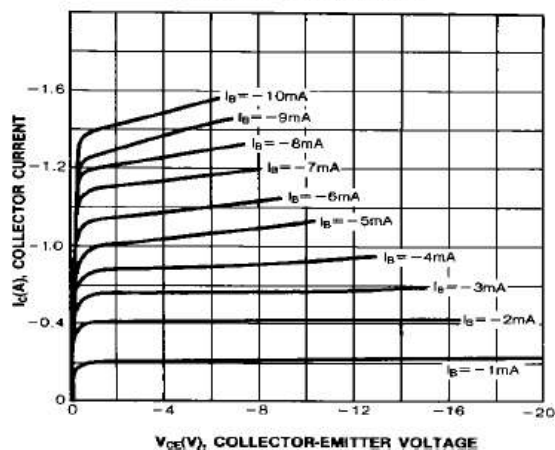
| Rank | R | O | Y | G |
|-------|--------|---------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 | 200-400 |

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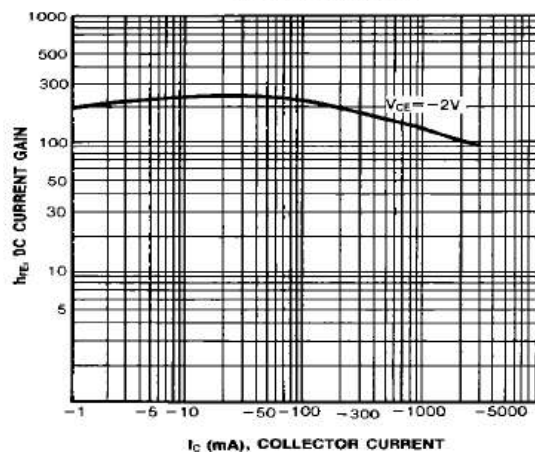
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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

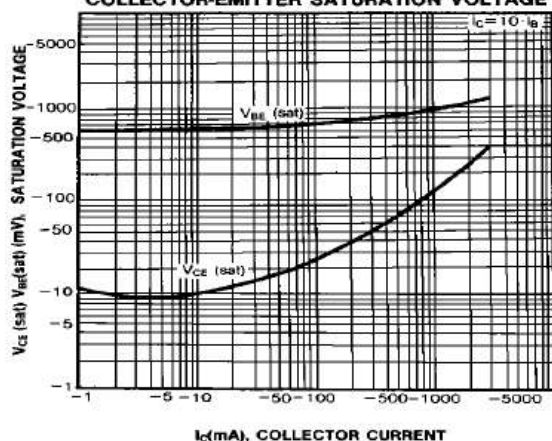
STATIC CHARACTERISTIC



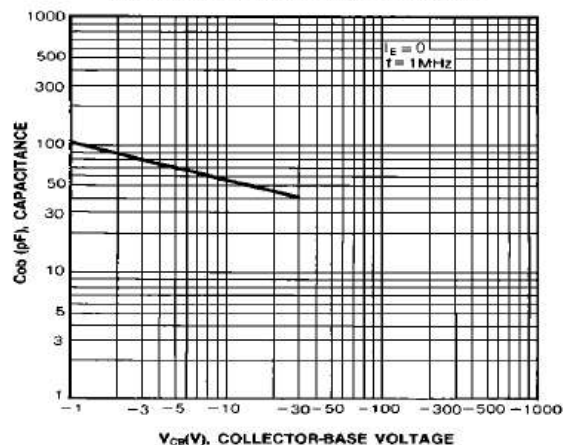
DC CURRENT GAIN



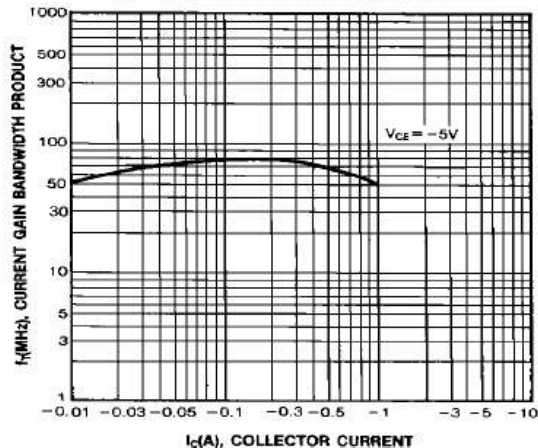
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



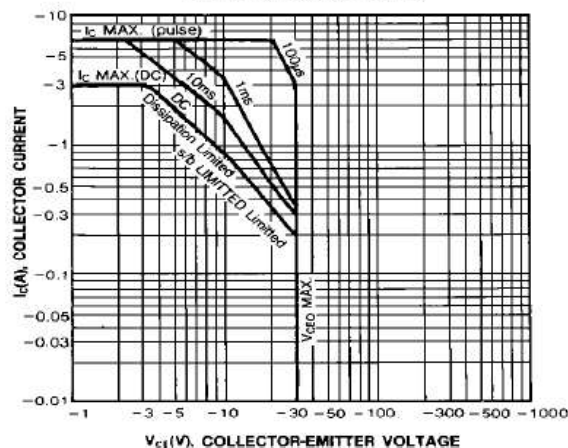
COLLECTOR OUTPUT CAPACITANCE



CURRENT GAIN-BANDWIDTH PRODUCT



SAFE OPERATING AREA



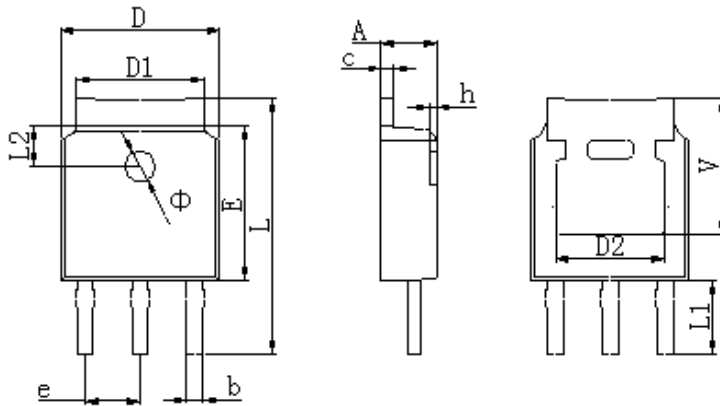
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PACKAGE OUTLINE

Plastic surface mounted package

TO-251

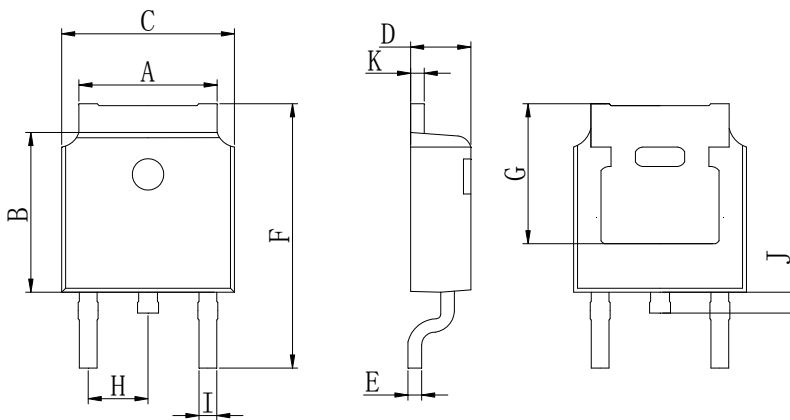


| TO-251 | | |
|----------------------|------------|--------|
| A | 2.200 | 2.400 |
| b | 0.500 | 0.700 |
| c | 0.460 | 0.580 |
| D | 6.500 | 6.700 |
| D1 | 5.100 | 5.460 |
| D2 | 4.830 Typ. | |
| E | 6.000 | 6.200 |
| e | 2.186 | 2.386 |
| L | 12.000 | 12.600 |
| L1 | 5.100 Typ. | |
| L2 | 1.400 | 1.700 |
| Φ | 1.100 | 1.300 |
| h | 0.000 | 0.300 |
| V | 5.350 Typ. | |
| All Dimensions in mm | | |

PACKAGE OUTLINE

Plastic surface mounted package

TO-252

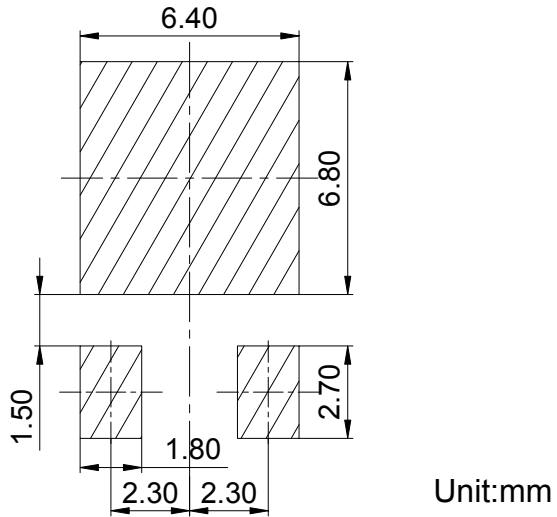


| TO-252 | | |
|----------------------|-----------|-------|
| A | 4.95 | 5.59 |
| B | 5.40 | 6.63 |
| C | 6.05 | 7.10 |
| D | 2.20 | 2.40 |
| E | 0.40 | 0.61 |
| F | 8.80 | 10.60 |
| G | 5.35 Typ. | |
| H | 1.98 | 2.59 |
| I | 0.50 | 0.90 |
| J | 0.50 | 1.20 |
| K | 0.45 | 0.89 |
| All Dimensions in mm | | |

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SOLDERING FOOTPRINT



PACKAGE INFORMATION

| Device | Package | Shipping |
|--------|------------|-------------------|
| B772 | TO-251/252 | 80PCS/Tube |
| | TO-252 | 2500PCS/Tape&Reel |